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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,118	12/21/2001	Robert Harvey Kane	US010688	3122

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EXAMINER


CURTIS, CRAIG

ART UNIT PAPER NUMBER

2872

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/028,118	Applicant(s) KANE, ROBERT HARVEY	
	Examiner Craig Curtis	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Disposition of the Instant Application

- This Office Action is responsive to Applicant's Amendment filed on 8 January 2004.
- By this amendment, Applicant has amended claims 1, 5, 6, and 8.
- Claims 1-13 presently are pending in the instant application.

Claim Rejections - 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claim 1 is rejected under 35 U.S.C. 103(a) as being over OLYMPUS (JP 10208284 A) in view of Taylor et al. (5,299,043).**

OLYMPUS discloses the invention as claimed--[a] light polarizing device (see Fig. 1) comprising: a polarizing element (30 & 22 in Fig. 2) having an optically transparent substrate (see 22), an environmentally sensitive polarizing element (30, it being noted that everything is, to a greater or lesser degree, environmentally sensitive--in the case of said polarizer, humidity from the environment, for example, would in time negatively influence its performance) on said substrate, and a

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sealed enclosure (see 42 & lines 7-8 in BASIC-ABSTRACT) surrounding said polarizing element, the enclosure having a non-reactive (*read:* inert) atmosphere (*viz.*, nitrogen) to protect the polarizing element from the ambient environment (*Id.*)—**EXCEPT FOR** an additional teaching wherein an optically transparent cover sheet sealed to the substrate, forming a sealed enclosure surrounding said polarizing element.

Taylor et al., however, disclose an optically transparent cover sheet (*viz.*, 86 in Fig. 7) sealed (when enclosure 82 is closed) to the substrate, forming a sealed enclosure surrounding said polarizing element (50 in Fig. 7 of Taylor et al.; 30 and 22 in Fig. 2 of OLYMPUS). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the light polarizing device of OLYMPUS such that it further comprise an optically transparent cover sheet sealed to the substrate, forming a sealed enclosure surrounding said polarizing element, as explicitly disclosed by Taylor et al., for at least the purpose of providing a high degree of protection (*i.e.*, isolation) for said polarizing element.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over OLYMPUS (JP 10208284 A).

OLYMPUS discloses the claimed invention as set forth above--and further teaches the following additionally recited limitations: an optically transparent cover sheet (43 in Fig. 1); a plurality of spacers (26-1 & 26-2 in Fig. 1) distributed around the periphery of said device and supporting said

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cover sheet on the substrate above the element--**EXCEPT FOR** an explicit teaching of a sealant extending around the periphery of said device between said substrate and said cover sheet.

OLYMPUS does however disclose the airtight sealing of said device (lines 7-8 in BASIC-ABSTRACT), and it is submitted that although OLYMPUS does not specifically disclose the precise nature of said airtight sealing, the use of sealants for such purposes is notoriously old and well-known in the enclosure art, and for at least this reason, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified, if necessary, the invention of OLYMPUS such that a sealant extend around the periphery of said device between said substrate and said cover sheet.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over OLYMPUS (JP 10208284 A) in view of Taylor et al. (5,299,043), as set forth above with regard to claim 1, and further in view of Shimizu et al. (6,511,183).

The combination discloses the invention as set forth above **EXCEPT FOR** an explicit teaching wherein said polarizing element is a wire-grid polarizing element.

Shimizu et al., however, provide an explicit teaching wherein a wire-grid polarizer can be substituted for a conventional polarizer (col. 12, ll. 23-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of OLYMPUS such that a wire-grid polarizing element be substituted in place of polarizing element 30, for at least the dual purpose of optimizing to a desired degree the extinction of a desired polarization component

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as well as generally improving the management of polarization of light propagating through said device.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over OLYMPUS (JP 10208284 A) in view of Shimizu et al. (6,511,183).

OLYMPUS discloses the invention as set forth above with respect to claim 3 **EXCEPT FOR** an explicit teaching wherein said polarizing element is a wire-grid polarizing element.

Shimizu et al., however, provide an explicit teaching wherein a wire-grid polarizer can be substituted for a conventional polarizer (col. 12, ll. 23-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of OLYMPUS such that a wire-grid polarizing element be substituted in place of polarizing element 30, for at least the dual purpose of optimizing to a desired degree the extinction of a desired polarization component as well as generally improving the management of polarization of light propagating through said device.

5. Claims 5 -7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kizawa et al. (JP 405300416 A).

Kizawa et al. disclose a sealable housing (1) for use in a sub-assembly for a display device ((which term has not been afforded patentable weight, as it has been held that a portion of a preamble is denied the effect of a limitation when the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness

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upon the introductory clause--*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)), the sealable housing comprising mounting apertures (viz., 2g, 2h, 2j) for optical elements—**EXCEPT FOR** the following additionally recited claim limitations: wherein said sealable housing comprises triangular top and bottom portions and three face portions extending between the top and bottom portions to form a wedge-shaped enclosure, the face portions comprising mounting apertures for optical elements; and wherein said three face portions are rectangular.

It has been held, however, that, absent persuasive evidence that the particular configuration of the claimed invention is significant, changes in shape such as those claimed in the above-recited limitations are a matter of design choice that a person of ordinary skill in the art would have obvious at the time the invention was made, for at least the purpose of producing various housing geometries.

In re Dailey, 357 F.2d 669, 149 USPQ (CCPA 1966).

6. Claims 8-10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer et al. (5,504,544).

With regard to claims 8-10, Dreyer et al. disclose the invention as claimed--[a] sub-assembly for a display device (intended use), comprising a sealable housing (see Fig. 9) having a third mounting aperture (viz., the aperture in which lens 23 is disposed in Fig. 9), a light polarizing element (an inherent element in polarization-modulating display 32) having an environmentally sensitive active surface, a light modulator panel (32), and a lens (23) sealed into the third aperture (see Fig. 9)--**EXCEPT FOR** explicit teachings of the following: wherein said sealable housing further comprises

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first and second mounting apertures; and wherein said light modulator panel is sealed into said second aperture; wherein said sealable housing comprise triangular top and bottom portions and first, second, and third rectangular face portions extending between the top and bottom portions to form a wedge-shaped enclosure, the first, second, and third mounting apertures being located in the first, second, and third rectangular face portions, respectively; and wherein said top and bottom portions be right triangles having two short sides and a long side, the first face portion extending between the long sides of the top and bottom portions.

It would however have been obvious to one having ordinary skill in the art at the time the invention as made to have modified the sealable housing taught by Dreyer et al. such that (1) it further comprise first and second mounting apertures, said light modulator being sealed into said second aperture, for at least the purpose of making said sealable housing more robust, since it has been held that rearranging parts of an invention involves only routine skill in the art: *In re Japikse*, 86 USPQ 70; (2) it comprise triangular top and bottom portions and first, second, and third rectangular face portions extending between the top and bottom portions to form a wedge-shaped enclosure, the first, second, and third mounting apertures being located in the first, second, and third rectangular face portions, respectively; and (3) wherein said top and bottom portions be right triangles having two short sides and a long side, the first face portion extending between the long sides of the top and bottom portions, for at least the reason of making more convenient surveillance of regions perpendicular to said three faces; and with regard to said top and bottom portions being right

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triangles, such a change in shape would have been obvious for at least the reason of minimizing the amount of material needed to realize said sealable housing. *In re Dailey*, 357 F.2d 669, 149 USPQ (CCPA 1966).

With regard to claim 12, although said light-modulator panel 32 of Dreyer et al. is taught as being a transmissive liquid crystal light-modulator panel, transmissive and reflective liquid crystal light-modulator panels are, depending on a desired projection geometry art recognized equivalents in the projection art, and the selection of either of these known equivalents to achieve a certain projection orientation at the time the invention was made would have been obvious to and well within the level of ordinary skill of one of ordinary skill in the art.

With regard to claim 13, lens 23 in Dreyer et al. is taught as being a projection lens (see Fig. 9; also see col. 4, ll. 25-28).

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer et al. (5,504,544) in view of Shimizu et al. (6,511,183).

Dreyer et al. disclose the invention as set forth above **EXCEPT FOR** an explicit teaching wherein said polarizing element is a wire-grid polarizing element.

Shimizu et al., however, provide an explicit teaching wherein a wire-grid polarizer can be substituted for a conventional polarizer (col. 12, ll. 23-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the sealable housing of Dreyer et al. such that a wire-grid polarizing element be substituted in place of the polarizing element

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inherently taught therein, for at least the dual purpose of optimizing to a desired degree the extinction of a desired polarization component as well as generally improving the management of polarization of light propagating through said device.

Response to Arguments

8. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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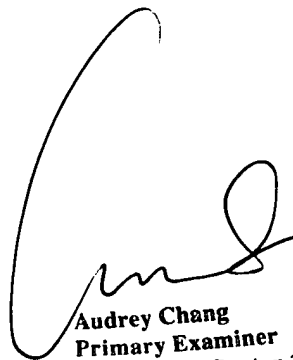
Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Curtis, whose telephone number is (571) 272-2311.

Any inquiry of a general nature regarding the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0956.

C.H.C.

Craig H. Curtis
Group Art Unit 2872
1 April 2004

A handwritten signature in black ink, appearing to read 'Audrey Chang', is written over a printed name and title.

Audrey Chang
Primary Examiner
Examination Center 2800